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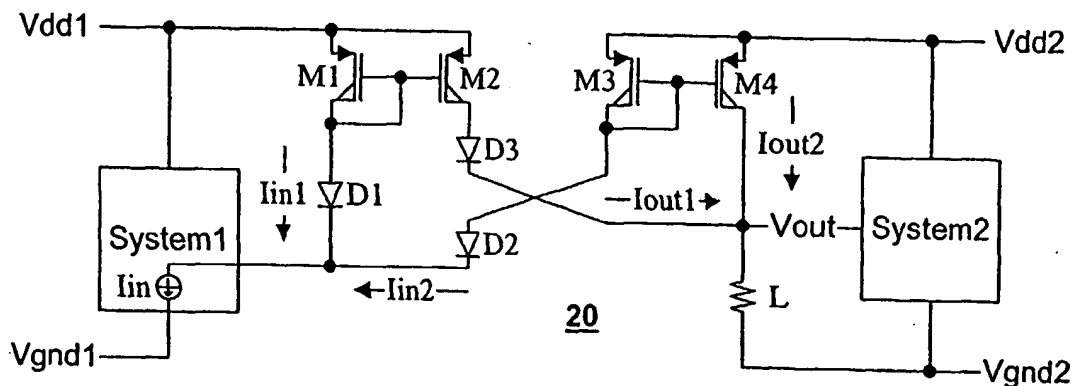
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#### Declaration under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE,

[Continued on next page]

(54) Title: LEVEL SHIFTING CIRCUIT BETWEEN ISOLATED SYSTEMS



(57) Abstract: A level shifting circuit (20, 30) couples an input current ( $I_{in}$ ) from one system to another, isolated, system, by driving a single load ( $L$ ) via one or more current mirrors of a common type. In a first embodiment (20), two similar type (either N-type or P-type) current mirrors ( $M1, M2; M3, M4$ ) provide output current ( $I_{out1}, I_{out2}$ ) to a common load. Diodes ( $D1, D2$ ) are used to split the input current ( $I_{in1}, I_{in2}$ ) between the two current mirrors during normal, non-faulty conditions, and to turn off either one of the two current mirrors during a fault condition to permit proper operation in the presence of a fault. In a second embodiment (30), a single current mirror ( $M1, M2$ ) mirrors the input current ( $I_{in}$ ) to the output load ( $L$ ), and a pair of diodes ( $D1, D2$ ) selects which of the isolated systems to use as the power source in the event of a fault.

## INTERNATIONAL SEARCH REPORT

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PCT 03/05177A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H03K19/0185

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H03K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, IBM-TDB, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 452 418 B1 (DE LANGEN KLAAS-JAN ET AL) 17 September 2002 (2002-09-17) cited in the application column 2, line 40 - column 3, line 44; example 3	1,8,19, 20
A	US 6 154 061 A (BOOMKAMP ALOYSIUS J M ET AL) 28 November 2000 (2000-11-28) cited in the application the whole document	1,8,19, 20
A	US 5 030 855 A (LEUNG WINGYU) 9 July 1991 (1991-07-09) the whole document	1,8,19, 20

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International

Application No

P 03/05177

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